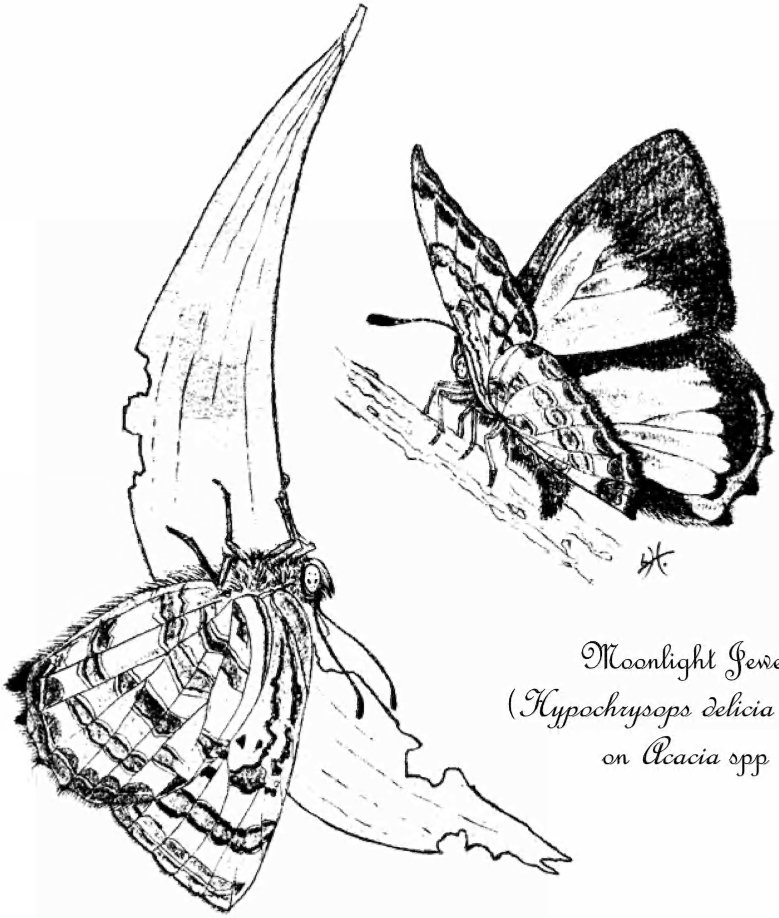

Moonlight Jewel
(*Hypochrysops delicia delicia*)
on *Acacia spp*

Butterfly & Other Invertebrates Club Inc. Newsletter

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CLUB PLANNING AND ORGANIZING GROUP - 2004

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Vice President:	John Moss	07 3245 2997
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Publicity:	Lois Hughes	07 3206 6229
Project Officer:	Frank Jordan	07 3844 6677

PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS AND MEMBERSHIP DETAILS

PO Box 2113, Runcorn 4113, Queensland
Membership fees are $12.00 for Individuals/Oganisations and $17.00 for family membership.

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st
June issue – May 21st
September issue – August 21st
December issue – November 21st

COVER DRAWING

Moonlight Jewel (*Hypochrysops delicia delicia*) by Lois Hughes

PRESIDENT'S POSTING

Hello all. We are now in 10th birthday celebration mode and we'd love for you to share our success. Our achievements have been considerable. Two activities are planned. We will be participating in the Pine Rivers Shire Outdoor and Alive festival on the 31st October, and we'd love to have you come along, either to come and say hello, or to bring along any butterfly paraphernalia you have, including collections. We will be organising a butterfly release as part of this festival. The second activity will be a party as part of our end-of-year excursion at Nudgee Beach. Please see the program on the back page for details. For those we know, we'd love to see you again. For those of you we haven't met yet, we'd love to meet you.

On behalf of the Club I applied for a Volunteer Small Equipment Grant to buy a GPS unit. We have been awarded this grant. We're taking this as a bit of a birthday present. This equipment will be very helpful when we go on excursions and locate unusual or rare butterfly food plants.

Looking forward to seeing you again, or meeting you, soon. **Helen Schwencke**

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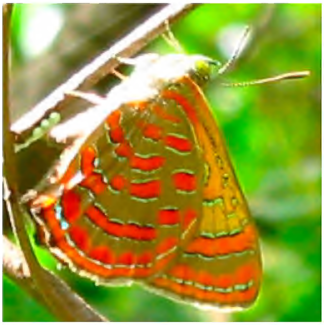
Moonlight Jewel (*Hypochrysops delicia delicia*)

I have been an observer of Mother Nature for countless years now, but she still manages to show me things that just leave one looking on in awe. The latest of these occurred in March 2003.

I was wandering around my backyard checking on how the different larvae were going on their respective host plants, when out of a cloud of about ten Plumbago Blues, flew a larger blue butterfly that appeared red underneath. My immediate thoughts were that it could have only been one of the Jewel butterflies, but a positive i.d. could only be made if the insect landed long enough for me to compare the differences.



Moonlight Jewel
photo supplied by Bob Miller

Sure enough, after a couple of circuits around my *Acacia spectabilis*, she perched on the very highest branch of the foliage – a habit the Jewel butterflies use to frustrate observers! Being too high for identification, I stood there and watched her, just in case she came closer.

She proceeded to walk around the foliage, then onto the branch, moving her antennae up and down all the time, as if she was looking for something special. Was she testing it to see if it was one of her known host plants, or was there still more? With these thoughts running through my head, I noticed that she was now hanging upside-down, still walking along the branch.

All of a sudden, she was gone. She let go of the branch, and with the precision of a trapeze artist, she fell down past three branches, grabbed hold of the fourth and proceeded to do as she did on the top. Walking along, head down, antennae moving up and down. Still looking for something? After walking along the branch for a minute or two, she once again went onto the underside and let go, this time catching a branch within thirty centimetres of my head.

She was now close enough for a positive i.d. but although at this stage I could narrow it down to two butterflies, I needed her to open her wings so I could see the colour of the upperside.

She walked along this branch, again going through the same motions. A minute or two passed before I could see the upperside colour, a brilliant metallic blue, with large bright red patches towards the base of the upperside of the hindwing.

But what was she doing on this Acacia? The larvae feed on different species of Acacias, but this one is not one of those listed for it. This confirmed that it was indeed a Moonlight Jewel.

The underside of the wings is also something that can only be described as spectacular. They have an orange-beige background colour with numerous bright red spots, surrounded by metallic green scales. The description doesn't do them justice at all, they have to be seen glistening in the sun before they can truly be appreciated.

After what seemed to be an eternity to me, she stopped and seemed to go into a trance. She then proceeded to lay her eggs on the upperside of the branch she was standing on.

Three eggs were layed when I noticed an ant looking at the first one. Knowing the incredible predation on butterfly eggs by ants, I thought that they were doomed from the start, but it wasn't to be. The ant inspected the egg for a short time, and then went about doing whatever ants do. The eggs were all still intact. She layed fifteen eggs before the rain started to fall, making it to eighteen before she was knocked off of the branch. She then flew away to find shelter.

So as to confirm this plant as a host plant, I decided to take the eggs inside and raise them through under controlled conditions.

The larvae emerged from the eggs in exactly two weeks. They were no larger than a pin head, but by the time they pupated they had grown to about 25mm. long. They stayed dormant in their pupae until the first ones started to emerge as adults eighty one days from when the eggs were laid. There was a steady stream of adults emerging thereafter.

After talking to other entomologists about the ants not touching the eggs of this particular butterfly, it seems that upon emergence of the larvae from the eggs, the ants will either carry, or herd them back to their nest, or another suitable shelter near the foliage. This shelter can be as simple as an old seed pod, a piece of bark trapped on the tree, or even a couple of leaves joined together. They stay in these shelters, attended by the ants, until nightfall. The ants will then herd them out onto the foliage to feed, guarding them all the time. They then herd them back to the relative safety of the shelter until the following night, when they are again herded out to feed.

Watching this symbiotic relationship in progress, it is really hard to believe that these two invertebrates are not deadly enemies; after all, ants eat caterpillars. In return for protection, the ants are treated to a sugary substance, exuded from glands on the rear of the larvae.

As it turns out, what the female butterfly was looking for was evidence of the ant colony before she was willing to lay her eggs. The ant colonies occur in borer holes in the dead branches. I used to trim all dead branches off of my Acacia, but I now know they are an important part of the diversity of my garden.

For those of you that are familiar with ants, these are *Crematogaster* sp. For the rest of us that do not know ant species, they are small black ants that walk around with their pointed abdomens raised when they are disturbed.

The adult butterflies are approximately 32-35mm. from wingtip to wingtip. They generally fly too high for identification.

The main host plant for this butterfly on the Blackall Range is *Acacia melanoxylon*, but a full list of host plants, along with any other information you may require about this, or any other butterfly can be found by reading *"Butterflies of Australia, their Identification, Biology and Distribution"* by Michael Braby, 2000. ***Bob Miller***

PLANT PROFILE

GLORY WATTLE (*Acacia spectabilis*)

HOST BUTTERFLIES : Tailed Emperor *(Polyura sempronius sempronius),* Large Grass-yellow *(Eurema hecabe hecabe),* Imperial Hairstreak *(Jalmenus evagoras evagoras)* and Moonlight Jewel *(Hypochrysops delicia delicia).*

HEIGHT : Can grow to more than 10 metres tall.

SHAPE : Nicely rounded canopy, fern-like foliage becomes slightly pendulous when in full bloom.

GROWTH AND FEATURES : Prefers full sun and a well drained soil, but can tolerate a wide variety of soil types. Flowers and fruits profusely. The branches and trunk are covered by a bluish-white waxy coating.

FERTILIZER : Generally, a handful of one of the processed chicken manures (now readily available) upon planting, followed by a couple of handfuls every few months. Mulch to approximately 15 centimetres deep, keeping the mulch 15 centimetres from the trunk.

Acacia disparrima

WHY WAS THIS PLANT CHOSEN? : This, along with Hickory Wattle *(Acacia disparrima)*, is a new hostplant discovery for the Moonlight Jewel *(Hypochrysops delicia delicia).* Also of all the hostplants listed for the Tailed Emperor, this is one of the most attractive for them. It is not unusual to find upwards of twenty larvae at a time feeding on the foliage. ***Bob Miller***

EXCURSION REPORT

Jacobs Well Environment Centre, Saturday 29th May, 2004

Isolated like three small islands in a sea of sugar cane, are three low hills at Jacobs Well, one of which is occupied by the Environmental Education Centre, formerly the local state school. Students of all ages from south-eastern Qld and occasionally further afield, visit the centre for educational programs based either on Moreton Bay or the nearby wetlands.

In 1989 a program of “learnscaping” the grounds commenced. The philosophy behind our approach is to create living, dynamic educational areas outdoors, that also offer ecological opportunities, and help to make learning fun and multi-dimensional.

After some initial plantings of screening and bird-attracting species around boundary fences, we commenced the sensory garden, incorporating a range of sensory sensations such as plants with aromatic or textured foliage, perfumed flowers, or textured bark, and an assortment of ground textures including logs, pavers, pebbles, sand, rocks, boulders, and bark chips. This area has proven hugely popular with students of all ages who use it in pairs, with one blindfolded and shoe-less!

Following this was the Bush Tucker learnscape incorporating a large diversity of edible native plants. Some of the students’ favourites are *Austromyrtus dulcis* (Midyim), *Eugenia reinwardtiana* (Beach Cherry), *Elaeagnus triflora* (Millaa Millaa Vine), *Citrus australasica* (Finger Lime), *Macadamia integrifolia*, and *Mischarytera lautereriana* (Corduroy Tamarind).

The biggest challenge though was the Frog Pond learnscape, with an above ground pond and a clay pan pond linked by a rocky waterway, and recycling dam water by pump. Plantings around this complex incorporated mainly butterfly host plants, but also some bird-attracting species, as well as some perfumed plants and showy flowering species. This area was constructed almost solely by our talented groundsman, Bryan Quelch.

All plantings have occurred without town water and have thrived surprisingly well, with few losses along the way. For the past 7 years the centre’s gardens have won the Schools section of the Gold Coast City Council’s Garden Competition.

Glenn Leiper

A very pleasant afternoon was spent being guided through the facilities by Glenn. Of particular interest was the Centre’s specimens of *Clausena smyrelliana.* Even that late in the season these plants had some Orchard Swallowtail caterpillars (*Papilio aegeus*) on them, and evidence of past chrysalises. Please also see Dennis Bell's Rare Plant profile on this plant. Thanks goes to Glenn for hosting our activity.

Helen Schwencke

BOOK REVIEWS

Grow Natives of the Gold Coast by Graham J. McDonald

Published by and available from S.G.A.P. (Qld. Region) Inc., Gold Coast Branch, P.O. Box 498 Earle Plaza, Nerang. Q. 4211 trading as Australian Plants Society – Cost $13.50 for S.G.A.P. members. $15.00 for others. $10 for 10 or more copies.

From the book – "Our walking encyclopedia – Graham McDonald is a consultant botanist working in the Gold Coast Region. Experience gained in this area has been invaluable in writing this book. He has written other books 'Growing a Rainforest Garden' and 'Growing a Butterfly Garden in S.E. Qld.'. Graham taught Science (Biology and Earth Science) in various High Schools for 21 years. Then he set up and ran a small business specialising in growing native plants, landscaping and gardening. He is an active member of several environmental organizations and has received community volunteer awards, including a national Green Australia Award. Graham also did the line drawings and took the cover photo.
The book has 3 aims
To show how to create beautiful native gardens (which support local wildlife)
To foster a greater appreciation of our local flora and
To show how our region's biodiversity is based on its geology"
From Ross Greenwood's forward (in part)
"……….. Through gaining greater knowledge of our plant resources and the values that individual species can offer, we begin to become better custodians of our natural resources and gain greater enjoyment and satisfaction when developing, managing and maintaining gardens and landscapes."

Graham McDonald has once again authored a practical, interesting and valuable book, with eighty pages of text liberally illustrated throughout with black and white photos and line drawings. At the back of the book, each of the twelve chapters are further enchanced by colour photos illustrating plants, gardens and ideas and techniques readers can copy, learn from and admire.

In the appendix there are extensive plants listed along with their various features such as bird attracting, butterfly hosts, frog friendly etc., another helpful guide to those desiring to create wildlife friendly habitats.

The 12 chapters cover (1) Why Australian gardens (2) Designing and planning your garden (3) Garden construction and plant management and (4) a planting guide. Chapters 5 through 12 cover the different types of countryside based on the geology of the area, which determines the soil type which in turn determines the plants most suited to that particular soil type. In each chapter I really loved the sections called “Problems and Solutions” which gives practical advice and “Digging Deeper” which goes into the nutrient levels of each particular soil type and of course the plants which thrive under these conditions. If you’ve ever wondered why some native plants just don’t do well in your garden you may just find your answer here.

Finally I have found the advice I have long sought after. I can now confidently proceed to further transform our 21 acres of bush and grazing land into a flora and fauna paradise.

I would highly recommended this book for anyone involved in re-vegetation and native gardening and not only on the Gold Coast. I was easily able to recognize the different soil types on our land at Mt. Cotton and the plant species each soil type supports.

Congratulations on a very attractive, easily understood and very practical “how to” publication. I can hardly wait to get my hands “dirty” again! A very welcome addition to my library.

Lois Hughes

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Mimika Butterflies by Robert Gotts & Norris Pangemanan

John E. Nielsen

Gotts, R. & Pangemanan, N. (2002). Mimika Butterflies. P.T. Freeport Indonesia, 287 pp., softback. ISBN 979-97503-0-X.

Mr Gotts and Mr Pangemanan are to be commended for a surprisingly useful and informative guide to the butterflies of the Mimika subdistrict of Papua (formerly Irian Jaya), Indonesia. Their book supplements the findings of a specially-commissioned biodiversity survey of the Mimika region in 1997; the species depicted in the book representing those encountered during the survey and a number of less common species that were collected or recorded in the region over an extended period by the co-author, Norris Pangemanan. The authors share an association of more than twenty-five years.

The cover illustration raises the readers’ expectations of the book immediately – a freshly emerged male Paradise Birdwing (*Ornithoptera paradisea*) graces the cover. The authors have arranged the text in a logical manner, beginning with a brief description of the habitat types in the Mimika region and associated butterflies. Comment is also made on the distribution of butterflies within these areas, the taxonomic arrangements used in the text and limitations imposed on the work by financial and time constraints. This text was commissioned more as a casual guide to the butterflies of this region as opposed to a strictly scientific guide, but is exceptional in both respects. A novel inclusion in this work is a brief section addressing butterfly photography, passing on tips undoubtedly the result of much patience and trying in the field and laboratory. These sections are enhanced by some beautiful photography that is sure to fire the imagination of naturalists who may have always wanted to visit New Guinea.

A total of 249 butterfly species are dealt with in this text and are superbly represented by some 740 fine, full colour illustrations, including life histories for a number of species. Five chapters deal with the butterflies themselves, with the Papilionidae (birdwings and swallowtails), Pieridae (whites and yellows), Nymphalidae (browns, nymphs, owls and danaids), Lycaenidae (blues, coppers etc.) and Hesperiidae (awls, flats and skippers) divided into subfamilies. Most genera are discussed in a brief prologue, except for the Lycaenidae and the Hesperidae where comparatively few genera are discussed in detail. Each species is described by succinct but accurate text detailing adult behaviour, host plants and taxonomy as appropriate. Unfortunately, knowledge of these attributes is limited for the Lycaenidae and Hesperiidae of this region, so life history information is sparse for these families. Most species are represented life size by pinned specimens with the exception of the larger members of the Papilionidae, where illustrations are reduced to fit the A5 pages.

The book notably focuses on the Papilionidae and Pieridae, with both the Birdwings (*Ornithoptera*) and Jezebels (*Delias*) given very good coverage; this region being somewhat of a "biodiversity hotspot" for these genera. For the *Delias*, the amount of detail provided is most welcome, as many species from this region are very poorly known. Even more helpful is information on how to separate endemic subspecies from their better-known counterparts found on other parts of New Guinea and Indonesia. This is especially welcome and should prove very useful to those interested in this genus. The *Delias* are also divided into lowland and montane species assemblages and then into species-groups. Thankfully, the authors have refrained from the Japanese approach to such books in erecting new subspecies with little or no scientific justification.

The taxonomic arrangements adopted reflect those of Parsons (1999, 1991) and D'Abrera (1971, 1975, 1978, 1990, 2003) for the most part. This book, although intended as a general guide, doubles as a concise and accurate scientific treatment of many of the butterflies of Irian Jaya not covered by those authors. D'Abreras' works, although lavishly illustrated, are extravagant in price and contain too many inaccuracies, seriously limiting their usefulness. In comparison, Parsons' works are excellent in their factual information and usefulness, but the 1999 work that remains the definitive text on the butterflies of Papua New Guinea is outside the price range for most of us. However, Parsons (1991) is quite comparable to *Mimika Butterflies* in both price and content, being perhaps a little more useful in terms of the greater coverage afforded to the Hesperiidae and Lycaenidae. However, *Mimika Butterflies* provides superior photography and is the only text in recent years to deal specifically with the butterfly fauna of Irian Jaya, a previously neglected region containing many unique species. Furthermore, this work illustrates many species endemic to Irian Jaya, many for the first time ever and all in full colour plates!

In conclusion, this text very admirably achieves the objectives of the authors and will secure its place in the literature of the butterflies of New Guinea. Although its scope is slightly more limited that that of comparable texts, it is sure to be an invaluable addition to any library and is a must for anyone even remotely interested in the butterflies of New Guinea in general. For those with an interest in either the *Delias* (Jezabels) or *Ornithoptera* (Birdwings), this book is invaluable. I am pleased to recommend this celebration of the magnificent Lepidoptera found on the great island of New Guinea and once again congratulate both authors on an outstanding text.

***Mimika Butterflies* is for private distribution only. Copies may be obtained from Mr. Robert Gotts, 22 Dungara Place, Winmalee, NSW 2777 (email: gottsr@hotmail.com). Cost of the book is $60.00, plus $6.50 postage.**

References**:**

D'Abrera, B. (1971). Butterflies of the Australian Region (First Edition). Lansdowne Press, Melbourne.

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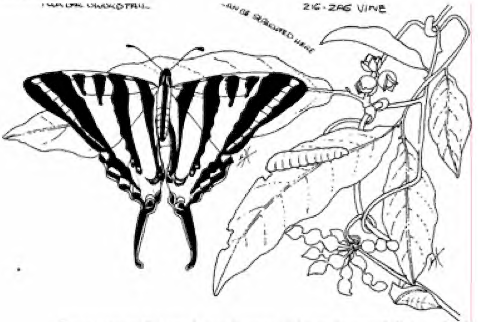
REPORTS

A preliminary list of butterflies recorded at Mudlo Forest Reserve, Kilkivan, Queensland.

The following butterflies were recorded at Mudlo during midday on the 21st January, 2004. They were mainly observed near the base of the reserve at the edge of the forest and along the walking track, and near the picnic area on the ridge. The hill-tops and the drier surrounding woodlands were not visited, and undoubtedly these areas will provide the source of many more species, particularly of Hesperiidae and Lycaenidae.

HESPERIIDAE (Skippers)
Ocybadistes sp. prob. *flavovittata* (Narrow-brand Grass-dart)

PAPILIONIDAE (Swallowtails)
Protographium leosthenes (Four-barred Swordtail)
Graphium sarpedon (Blue Triangle)
Graphium eurypylus (Pale Triangle)
Papilio aegeus (Orchard Swallowtail)
Papilio fuscus (Fuscous Swallowtail)
Cressida cressida (Clearwing Swallowtail)



Protographium leosthenes (Four-barred Swordtail) lifecycle

PIERIDAE (Whites and Yellows)

Catopsilia pyranthe (White Migrant)
Catopsilia pomona (Lemon Migrant)
Eurema spp. [prob. *brigitta* (No-brand Grass-yellow), *herla* (Pink Grass-yellow) and *hecabe* (Large Grass-yellow)]
Elodina spp. [prob. *angulipennis* (Southern Pearl-white) and *parthia* (Striated Pearl-white)]

Belenois java (Caper White)
Cepora perimale (Caper Gull)
Appias paulina (Yellow Albatross)

NYMPHALIDAE (Danaids, Browns and Nymphs)
Melanitis leda (Evening Brown)
Hypocysta irius (Orange-streaked Ringlet)
Acraea andromacha (Glasswing)
Cupha prosope (Bordered Rustic)
Phaedyma shepherdi (White-banded Plane)
Doleschallia bisaltide (Leafwing)
Hypolimnas bolina (Varied Eggfly)
Junonia villida (Meadow Argus)
Tirumala hamata (Blue Tiger)
Danaus chrysippus (Lesser Wanderer)

Acraea andromacha (Glasswing) lifecycle

Danaus plexippus (Monarch)
Euploea core (Common Crow)

LYCAENIDAE (Blues and Coppers)
Nacaduba berenice (Large Purple Line-blue)
Zizina labradus (Common Grass-blue)

Notes
The potential of a broad and interesting fauna and flora at Mudlo can be seen in the number of species of butterflies recorded in the approximately 100 minutes of observation during this short survey. Most of the species listed are widespread in Queensland, and many of them have migratory tendencies. Several of these species have their breeding habitats centred in vine scrub, such as that which dominates Mudlo, and surrounding hills. Thus it is an area of importance for the diversity and conservation of butterflies. Many of the butterflies listed were observed laying eggs on their particular foodplants found growing in and around the vine-scrub. In general these species require fresh foliage for the newly hatched caterpillars. No doubt the recent rains had provided the butterflies with plenty of available feeding sites generated by regrowth.

None of the listed butterflies are rare or endangered, although *H. irius* here, can be regarded as locally uncommon outside its broader north Queensland distribution. More sustained survey work, conducted throughout the year in the forest and in the surrounding open woodland, will add many more species to this preliminary list, and without doubt add to the better understanding of their biology and conservation status.

The hinterland has seen a vast depletion of natural habitats so essential for many butterflies. The Mudlo forest reserve can be regarded as very important for the future survival of butterflies endemic to vine-scrub, and for migratory species that utilize these isolated pockets of habitat as 'stop-over' breeding sites.

Andrew Atkins

Ed. On a visit previous to Andrew's, John Moss has found a skipper *Netrocoryne repanda* (Eastern or Bronze Flat), which is normally found in the moister coastal and montane areas to the east. John reports that the Shire Council officers responsible for this Reserve are keen to obtain a comprehensive list of butterfly and other insect species.

NEW HOST PLANT FOR YOU

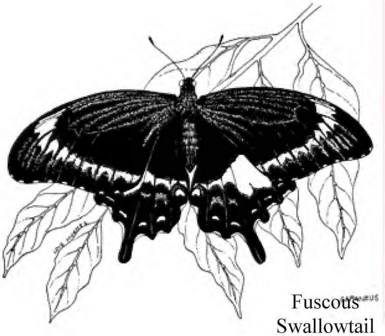
Rare Plant Profile - *Clausena smyrelliana*

Common Name : no common name
Height: 5 – 6m
Shape: Shrub, small tree

This is a rainforest plant which has a limited distribution being found only in one known locality in the Wide Bay district near Bundaberg. Previously it was also recorded from near Hervey Bay however this habitat has been destroyed by a housing estate. As such this plant has a very vulnerable status in the wild.

It is however an attractive plant for inclusion in any rainforest / butterfly garden. It has glossy deep green pinnate leaves which arise on the top of a series of narrow stems. White flowers are produced in late spring on the ends of the stems which have a strong honey/ sweet smell and are very attractive to butterflies and other insects. This is followed by white fruits which ripen in Autumn containing the soft seeds from which the plant may be propagated. The fruit however do not seem to be attractive to birds and do not fall from the plant readily but rather rot on the stems. These two factors combined probably result in the plant not being able to propagate itself effectively in the wild.

I have a 6m high plant in my garden after 8years. The plant prefers a well drained site and prefers some direct sunlight during the day. It is similar in requirements to its more widespread cousin ***Clausena brevistyla***.



Fuscous Swallowtail

In Brisbane this shrub is a foodplant for two butterflies. Both the Orchard Swallowtail (*Papilio aegeus aegeus*) and the Fuscous Swallowtail (Papilio fuscus capaneus) commonly oviposit on this plant preferring the newer growth and larvae develop strongly. Because the plant produces a lot of dark green leaves this provides some camouflage for the larva particularly at the adult green phase even if several larvae are on the plant. This is an advantage over both *Clausena brevistyla* and *Micromelum minutum* both of which have sparser leaves and can leave the butterfly larvae exposed to predators and parasites. This is a plant well worth growing to assist in its continued survival and also attract butterflies to the garden.

Dennis Bell

ITEMS OF INTEREST

Plant Collecting

An important issue for people interested in plant hunting (or collecting)!

Have you ever been out in the bush and found an interesting plant? Maybe even collected some seed from it, or taken a cutting, or dug up a seedling? For plant hunters, this is a common occurrence, and it's how most of our native plants came into cultivation.

And unfortunately some of these plants have never been seen again in the wild! Maybe they're still there, maybe they're not. Possibly no-one will ever know, because the original collector didn't go that one step further.

That one step is to take a specimen and send it into the Qld Herbarium. Now you may say, "Why bother? I know what it is! I don't need it identified!" But there's more to this than just an identification by a botanist.

A specimen sent into the Qld Herbarium (a section of the Qld Government's Environment Protection Agency) will be checked by a botanist and identified, but it doesn't stop there. If the specimen hasn't been found in that area before, or it has unusual features, or is a particularly impressive specimen, or is a rare species, then this specimen will be kept, along with any info you supplied, all data is put on computer, and then housed in the Herbarium's huge collection.

These Herbarium specimens date way back to our earliest explorers, botanists and amateur botanists, and offer an interesting insight into the former distribution of species. These records are crucial for the establishment of our list of rare and threatened plants, as well as providing information on distribution patterns, preferred soil types, diminishing or increasing populations, and species' preferred forest types.

These records are also presently enabling some local governments, eg. Brisbane, to establish a register of significant plant species within their boundary and, therefore, better inform their strategic planning and land acquisition programs.

Sending a specimen to the Herbarium also enables you to have a correct name for your plant. How many times have we bought a plant that has turned out to have an incorrect name?

The specimens also provide invaluable information for researchers, especially if the location details attached to the specimen are accurate, enabling the researcher to go back to the original collection site and check the live plant. I have used the Herbarium specimen records in this way many times to find elusive plants and photograph them.

So next time you find an interesting (or maybe even not that interesting!) plant, go that step further and add to the knowledge of our plants.

How to do it

1. Collect a specimen that contains sufficient features to enable identification, such as leaves and flowers or fruit. (Rainforest specimens can be identified by a leafy branchlet without flowers or fruit).

   If the plant is large enough, a specimen up to 30cm is best so it can fit on an A4 sheet. For small herbaceous species, collect as much of the plant as possible (without destroying the only specimen!). More than one specimen of smaller plants is often useful too.

2. Record location details as best you can. A GPS is ideal, but street name, suburb/district or even Street Directory co-ordinates is OK.
3. Put the specimen in a plastic bag with a few drops of water to keep it fresh until you press it (hopefully within 24 hours).
4. Press the specimen between sheets of newspaper under weights, eg. A brick or telephone books, or in a plant press if you're fortunate to have one. During hot, humid months, you'll need to change the paper after about 2 days or the specimen will go mouldy.
5. After a week or 2, the specimen can be taken out of the newspaper and placed on a fresh dry sheet of paper (I recycle A4 paper) and add the location details. Also if you can add other location info such as what other plants were growing with it, the soil type, aspect (N, S, E, W), shade/sun, etc.
6. Record your specimens for your personal records (you won't receive your specimen back), especially if you're sending in multiple specimens and forget what they were and where you found them. (I've done that more than once!)
7. Now wrap the specimens in newspaper or other paper, slip in a large envelope and mail off to:
   Identification and Advisory Service, Qld Herbarium, Mt Coot-tha Botanic Garden, Mt Coot-tha Rd, Toowong 4066
8. Depending on the number of specimens that have been received at the same time as yours, it usually takes 2 to 4 weeks to receive your identifications and also you'll be informed whether the specimens were retained in the Herbarium collection. Specimens in a pack of 10 or less will be processed quickly whereas larger numbers could take a lot longer.

Remember, collections from a National Park or similar reserves is a No-no without the correct permit

Happy plant collecting **_Glenn Leiper_**

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Festival of Butterflies

This last season has been exceptional for butterflies. With the late rains parasites have had little chance to build up early in the season, so that when the fresh growth grew on the various butterfly host plants, those butterflies which had managed to hang on could suddenly flourish in an orgy of breeding and population building. I didn't notice any significant parasite build up until late March. These circumstances made the following observation possible.

At the Environment Festival held as part of the Woodford Folk Festival on the Labour Day weekend recently, Frank and I went to contribute to the host plant enrichment of the Butterfly Walk that is part of our Club's project with the Festival. People kept coming up to us and mentioning the large number of butterflies hanging around on the ground along a roadway further into the site. So we went to investigate.

Lesser Wanderer (*Danaus chrysippus*)

Along a very exposed grassy slope that was dissected by a gravel road there were literally thousands of adult Monarchs (*Danaus plexippus*), Lesser Wanderers (*Danaus chrysippus*), and Blue Tigers (*Tirumala hamata*). If you walked by they became disturbed, then fly around for a little while before settling back on the ground and to all intents disappearing from sight. A close examination of where they were landing revealed bits of mowed and dead Blue Heliotrope (*Heliotropium amplexicaule*), a purple flowered weed. They were spending their time, proboscis (feeding tube) extended, sucking up some chemicals (pyrrolizidine alkaloids, according to Atkins, cited on p. 59, in Butterflies of Australia (1972) by Common and Waterhouse) from the dead parts of the plants. Frank mentioned the same phenomenon in the last issue, no. 32, p. 17. In any other year the phenomenon may not have been very noticeable, when butterfly populations are small.

Helen Schwencke

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Continuing Lois Hughes' article on Nectar Plants in the June 2004 Newsletter

The following article contains excerpts from Mary Hackett's Spring/Summer Newsletter published from Heritage Haven at Dural, a 130 year old farmhouse, with the surrounding 1-1/2 acre farm devoted to the growing and enjoyment of herbs and the celebration of life. Mary briefly shares her experiences and observations with us as well as the list of nectar rich butterfly attractant herbs in her "Butterfly Walk" section of the garden as well as an enticing recipe.

"When I was a child, going to school was exciting, and I would clamber through the wooden gateway in our paling fence and join my friend, Cecilia, in the lank grasses of the adjoining paddock. Together we would run and leap through the wet tangle of knee-high grasses, whooping and laughing as startled grasshoppers and insects whirred and sprang into the air at our approach. Struggling up the hill to the bus stop, always running late, we would finally collapse breathless on our globite school bags and proceed to de-seed ourselves of sticky paspalum heads. Small butterflies would flutter low amongst the grass around our feet …. a muted mosaic of lilac, pale blue, powder grey and cream. Small yet fast on the wing, these flyers danced in the morning light, flashing a metallic sheen from the upper surface of their wings. Sometimes we would succeed in cupping our hands around these fascinating jewels, our hearts skipping with delight as wing tips tickled our palms.

This morning those butterflies of childhood are tripping amongst the damp fronds of grass and flirting near the sprawling *scabiosa* in an area of garden where butterflies are encouraged. Here self-sown seeds of *alyssum* and *calendula* mix with thistles and seeding lettuces, while sages and daisies co-exist with globular heads of garlic and budding citrus trees. In such a mild wilderness of herbs and cottage plants, butterflies love to congregate. Only yesterday a brilliant Wanderer butterfly, migrating from the north, spread its black-veined, tawny-orange wings and fed repeatedly on the purple sprays of *Buddleia*. It is not unusual, in this part of the garden, for butterflies to actually land on one's head … no, it is not unusual …. but it is always magic!

By mid-summer, the garden is full of flowers and herbs at the height of their fragrance. With days too hot to linger in the sunshine the garden tends to become neglected and areas of wilderness allowed to emerge. This less than picture-perfect setting provides shelter, but, more importantly, a smorgasbord of delight, for one of nature's loveliest pollinators …. the butterfly. This fragile guest is enticed by sunny gardens, shelter from strong winds and fragrant offerings of nectar plants.

If you want to attract butterflies to your garden, one plant is not enough. You must think abundantly and spread out a welcome mat of nectar-filled flowers. Most herbs would appear on a butterfly's wish list, but so would many cottage plants and native shrubs. Plant exuberantly to welcome these graceful creatures, even adopting a little neglect, for stalks and leaves provide shelter as well as food for their survival. Above all, do not be tempted to use herbicides or insecticides to rectify untidiness or nibbled leaves. Keep your butterfly haven friendly and welcome not just butterflies, but all manner of birds, bees and beneficent bugs.

If space is limited in your garden, leave the caterpillars to their own devices and concentrate on luring butterflies with flowers. Most of us already have some nectar and shelter plants for butterflies, but it is exciting to realize that by adding some easy-care herbs or cottage plants we can enrich our gardens to develop our own personal butterfly sanctuary.

Becoming a butterfly gardener is not a flight of whimsy, it is a practical way to improve the balance between man and nature

Butterfly Wish List

Ageratums, Anise hyssop *Agastache foeniculum,* Aster, Balsam or Impatiens (espec. single flowered forms), Basil, Bergamot, Bottlebrush, Borage, Buddleia, California Poppy, Catmint, Clover, Coneflower, Cosmos, Daisy family, Dandelion *Taraxacum officinale,* Dianthus, Elecampagne *Inula helenium*, Elm, Fennel, Goldenrod, Heliotrope, Lantana, Lavender, Lilacs, Marjoram, Mignonette, Milkweed *Asclepias fruiticosa* (white), Mints, Nasturtium, Pansies, Phlox, Pincushion flower *Scabiosa*, Queen Anne's Lace *Daucus carota,* Rosemary, Sages *Salvia officinalis* and *S. elegans* (Pineapple Sage), Seaside Daisy, Star Jasmine *Trachelospermum* sp., Summer Savory, Sunflower, Thymes, *Verbena* sp., Veronica, Violas, Wallflowers *Erysimum,* Wild Bergamot *Monarda fistulosa* (pale coloured), Wild marjoram *O. vulgare,* Woolly Apple Mint *Mentha x villosa,* Yarrows

Butterfly Nectar for the Gardener

This is a unique herbal liqueur that needs to mellow for 6 months before serving – perfect for next Spring.

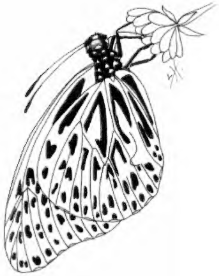
4 large oranges, zest only
1 lime
5 sprigs rosemary, 4cm long
2 cups vodka
1 cup brandy
1 cup honey

Peel or zest the skin from the cleaned fruit. Do not use any bitter white pith. Place the rosemary sprigs, zest, vodka and brandy in a glass jar. Seal and allow to steep for 3 days, shaking daily. Strain into a clean jar and whisk in the honey until it dissolves and the mixture clears. Seal tightly and allow to mature out of the sun for six months before using."

YOU ASKED

I would highly appreciate some information on blue butterflies spotted both at the Sunshine Coast and North Stradbroke Island, as they fly in great numbers towards the ocean. The butterflies are medium sized and of a clear blue colour. I am sorry but I'm not able to give a clearer description. I was simply struck by the number of them heading for the seas. It seemed somewhat suicidal? I would like to know the name of these butterflies, and perhaps some explanation as to why they behave as they do. I would need this for my work (I am a PhD student of indigenous literature).

Yours sincerely, Kikki

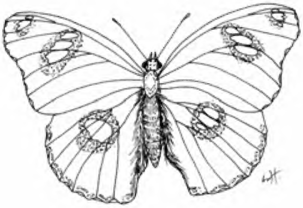


Blue Tiger (*Tirumala hamata*)

Hi Kikki, My name is Bob Miller and I have received an email from Daphne requesting help in identifying some migrating blue butterflies. The only butterfly in Australia that fits your description is the Blue Tiger. These butterflies form massive migrations that seem to head out to sea and do look to be completely blue in colour when in flight. Further information on these butterflies can best be referenced from "Butterflies of Australia" by Michael F. Braby, 2000. The only definite way of identifying a butterfly, if you are not familiar with them, is to actually capture one and then reference the excellent photos in the back of Michael Braby's Volume 1. Or if you have a digital camera, take some photos and email them to me, I am only too happy to help. ***Bob***

LETTERS

A recent item of interest. It has been my observation that most of the common birds do not show much interest in butterflies as food (possibly because some of the more common ones are distasteful). I rear a few butterflies for my and my grand-children's interest. Although I have reared most, I had not until recently managed to rear the Common Eggfly. I have a cage in my back yard in which I have been keeping some pairs. One day last week I went out to find that fairly rare bird, the Spangled Drongo, trying to get in the cage at them and I wondered if they might be a common predator specialising on them as food. I wonder if any readers have observed any such behaviour. Regards ***Felix Jenkins***



Common or Varied Eggfly
(*Hypolimnas bolina*)

WORLD WIDE WEB SITES TO WATCH

The World of Birdwing Butterflies http://www.nagypal.net/
This site offers you more than 500 images of all known species. There are also systematic lists and taxonomic notes to each species. This site can also be accessed from the Web Links About Lepidoptera under the heading, Just Butterflies (Papilionoidea & Hesperioidea) Birdwing Butterflies of the World.

YOUR CLUB'S MEMBERSHIP DIRECTORY

In February, 2002 your Club's organising committee decided to start encouraging members to network with each other in their local areas, and across their areas of interest. To this end we have now produced a membership directory. Only those members who have given us their permission have been included in the directory.

If you would like to be in a future issue of the directory please email Daphne at bowden@itconnect.net.au or phone: 07 3396 6334

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper
All Colour Book of Butterflies, by Robert Goodden
Lifecycle of the Ulysses Butterfly, Video, by Janet Richardson
Lifecycle of the Cairns Birdwing Butterfly, Video, by Janet Richardson
Bugs, Beetles, Spiders and Snakes by Ken Preston-Mafham, Nigel Marven and Rob Harvey
Collecting, Preserving and Classifying Insects by Queensland Museum
Australia's Insect Life by Peter Wilson
Butterflies of Australia by I.F.B. Common and D.F. Waterhouse. This is a 1981 reprint.

AVAILABLE FROM BOIC

Grow More Butterflies –
A selection of articles published in previous Newsletters $3.30 plus $1.10 postage

Butterfly Gardening –
A series of articles published in previous Newsletters $2.20 plus $1.10 postage

Butterfly Host Plants of SE Qld. and Nth. NSW –
A comprehensive list of host plants for this region $5.50 plus $1.10 postage

The **Butterfly Alphabet Poster** which shows all the letters of the alphabet and numerals 1-9 appearing in the wings of butterflies and moths. This poster can be viewed by visiting www.butterflyalphabet.com
Cost: Non-members $25 plus $5 postage Members $23 plus $5 postage

The **Domino Poster** - A guide for field, school or garden with 250 Australian butterfly illustrations in colour
Cost: Non-members $10 plus $1.10 postage Members $8 plus $1.10 postage

Poster -**Lifecycles of the Swallowtail Butterflies of South East Queensland**, compiled by the BOIC
Cost: Non-members $10 plus $5 postage Members $6 plus $5 postage

CD-ROM – Brisbane and Nearby Areas, Insects and Spiders by Peter Chew. Available from Peter Chew at 3 Byzance Close, Eight Mile Plains Q. 4113 and also from the B.O.I.C.

These items can be obtained from BOIC, PO Box 2113, Runcorn, 4113.

BACK ISSUES

Back Issues of the Club Newsletter are available at a cost of $2 each plus postage (1-2 copies $1.10 - 3-6 copies $1.50).

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Society for Growing Australian Plants : Spring Flower Show
When: Saturday & Sunday, 11th & 12th September, 2004
Where: Mt Cootha Botanic Gardens Auditorium (2003 UBD Map 158 Ref L14)
What: This is SGAP's annual flower show with displays of native plants from around Queensland and other states. Our Club will conduct an information stall on butterfly host plants
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au if you'd like to help out or for more details

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Marine Invertebrates Excursion to Point Cartright, Mooloolabah
When: Sunday, 26th September, 2004, meet 10.15am – 2.30pm
Where: Meet at the Harbour Parade Carpark, Buddina (UBD 2003 Sunshine Coast Map 80, Ref K3)
What: Under the guidance of Christine Clegg, a marine scientist who will interpret for us, we'll be looking at the wide and wonderful variety of marine creatures that become exposed in rock pools at the Spring Low tide (one of the lowest tides of the year). Should this wonderful experience not be available (eg. because of a storm surge, we'll look at the forest on the headland for butterfly host plants).

Bring: Morning Tea, Lunch and afternoon tea. for yourself, or to share. Rock-hopping and/or waterproof shoes will be needed. Sunscreen, hat, and insect repellant may also be useful.
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au

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Club's 10th Birthday celebration
Activity 1 – Outdoor and Alive Festival, Pine Rivers Shire

When: Sunday, 31st October, 10am – 4pm
Where: Meet at Leis Park (off Gympie Rd), Lawnton (UBD 2003 Map 98, Ref M5)
What: Club display, host plant workshop and public butterfly release
Club members with any butterfly displays, plants, collections, or other paraphernalia are invited to come and join the display. So that we can arrange for appropriate space, please let me know if you are planning to bring anything by 1st October.
Bring: yourself and your friends, hat, sunscreen and any food (if you don't want to buy from the stalls)
Contact: Helen on 3844 6677 or email hschwenc@dovenetq.net.au

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Planning and Management Meeting

What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome.
When: Wednesday 3rd Nov starting 6.30pm
Where: to be advised upon RSVP
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au to RSVP or for more details

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Club's 10th Birthday celebration & End-of-year function
Activity 2 – Nudgee Beach Excursion, party and light trapping

When: Saturday, 20th November, 3pm for as long as you want to stay until 9.00pm
Where: Nudgee Beach Reserve & Outdoor Education Centre
Meet: Nudgee Beach Reserve, O'Quinn St., (UBD 2003 Map 111, Ref L16)
What: Our 10th birthday celebration continues with (approximate times)

1. 3 – 5pm - a walk along the Boardwalk through mangroves (looking for various, hard to find, mangrove butterflies), and other wetland areas,
2. 5 – 6pm - a walk through the gardens, birthday party with cake, BYO plate or food to share or BYO picnic dinner, at the Nudgee

Beach Environment Education Centre, Nudgee Rd (Map 111, Ref P18)., and

3. 7.30 – 9.00pm - light-trapping for moths and other creatures at the Environment Centre after dark for those who would like to stay.

Bring: Plate of food to share, and / or BYO picnic dinner. Hat, sunscreen and insect repellant may also be useful.
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au

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If you plan to attend one of the above events, please contact the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Membership fees are $12.00 for Individuals/Oganisations and $17.00 for family membership.

Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2113
RUNCORN Q. 4113

Next Meeting: **Marine Invertebrates Excursion to Point Cartright, Mooloolaba, Sunday 26th September, 2004**